Utilizing Public Health Surveillance to Monitor Post Marketing Data on People with Rare Bleeding Disorders

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Prevention Program

- **Division of Hereditary Blood Disorders**

Mission:

- To reduce or prevent complications of hemophilia and other bleeding & clotting disorders & thalassemia
- Mandated by Congress

Prevention Program

- CDC has established a public health surveillance system for product safety among persons with bleeding disorders
- Eligibility
  - Receive care at a federally supported comprehensive care clinic
  - Congenital deficiency of any of the clotting factor proteins below 50% of normal
  - Diagnosis of von Willebrand disease

Prevention Program

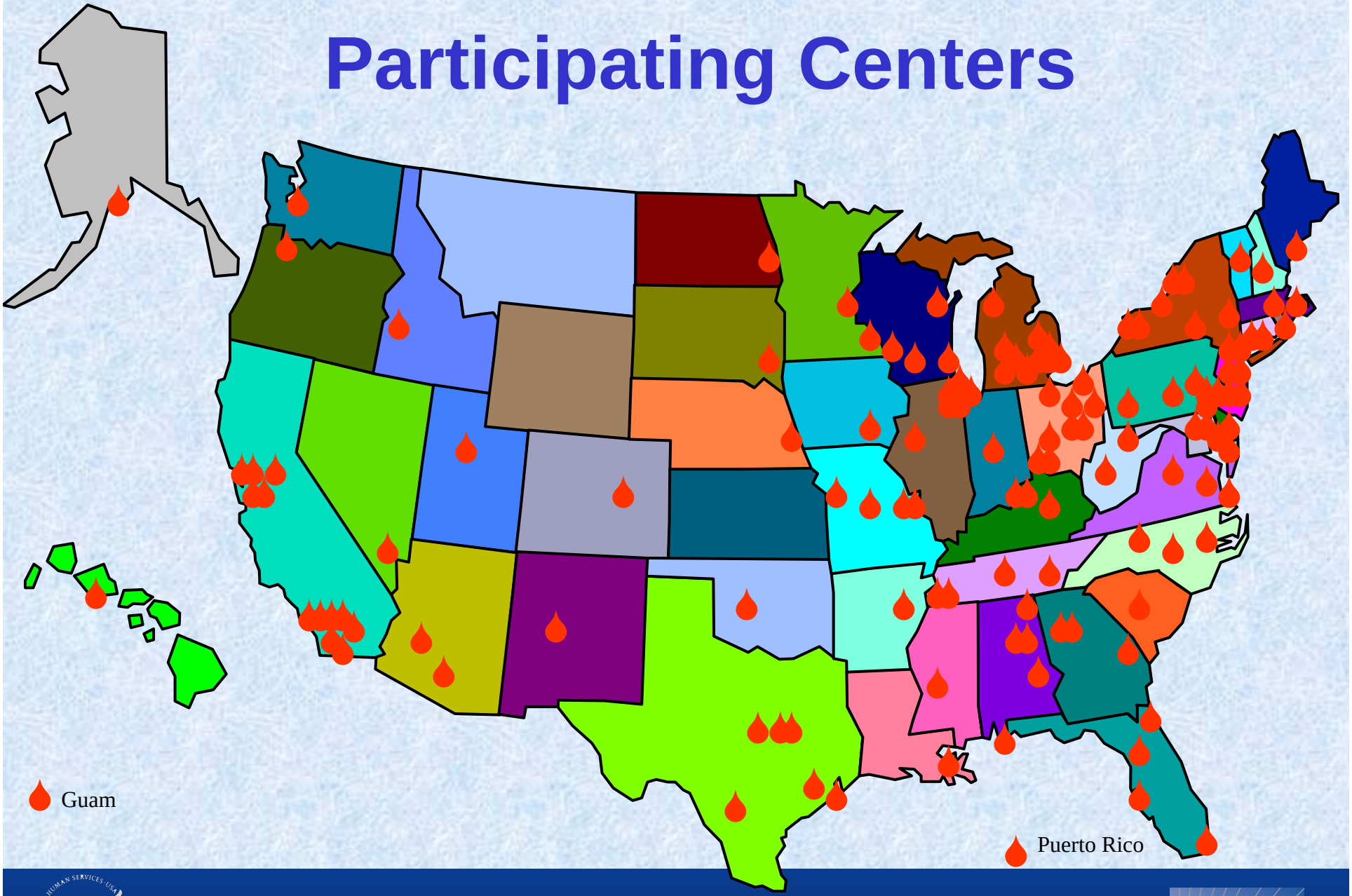
- **Target Priorities**
  - Blood product safety
  - Joint Disease
  - Women with bleeding disorders
  - Detection of hereditary abnormalities associated with bleeding & clotting disorders

Prevention Program

Cooperative Agreement

- Participate in blood safety monitoring and surveillance efforts
- Collaborate with lay organizations to deliver consistent prevention messages
- Maintain a prevention evaluation network to assess the efficacy of these prevention services

Participating Centers



Bleeding Disorder Surveillance

- Universal Data Collection System (UDC)
  - Monitor blood safety among the recipients of blood products
  - Monitor extent and progression of joint disease
  - Identify issues for further study

Universal Data Collection

Study Design

- National protocol approved by CDC and local human Investigational Review Boards.
- Standardized data collection annually using tools designed with input from experts
- Portion of blood specimen is stored
- Blood specimen is tested centrally for known infectious disease agents (hepatitis and HIV)
- New infections are investigated for link with product

Universal Data Collection

Data Elements

- Data collected by treatment center staff
  - Demographic (Date of birth, race, sex)
  - Clinical (Type of disorder, severity)
  - Treatment (Bleed and infusion frequency)
  - All blood and treatment products used
  - Infectious disease (Liver disease, joint infections)
  - Impact of joint disease on daily living
  - Joint range-of-motion measures

UDC Enrollment

- Since May, 1998, 16,289 persons with bleeding disorders have been enrolled
- There have been 40,382 UDC visits
- The overall national refusal rate is 7.6%
- Approximately 40% of UDC annual visit data are being submitted electronically using a clinical software tool

Electronic Impact on UDC

- Common electronic interface in the treatment centers will facilitate data sharing
- Distributed data collection across HTCs will make surveillance more efficient
- Facilitate the identification of new areas and patient populations for further study
- More opportunities to extend surveillance into new areas (e.g., inhibitor project)

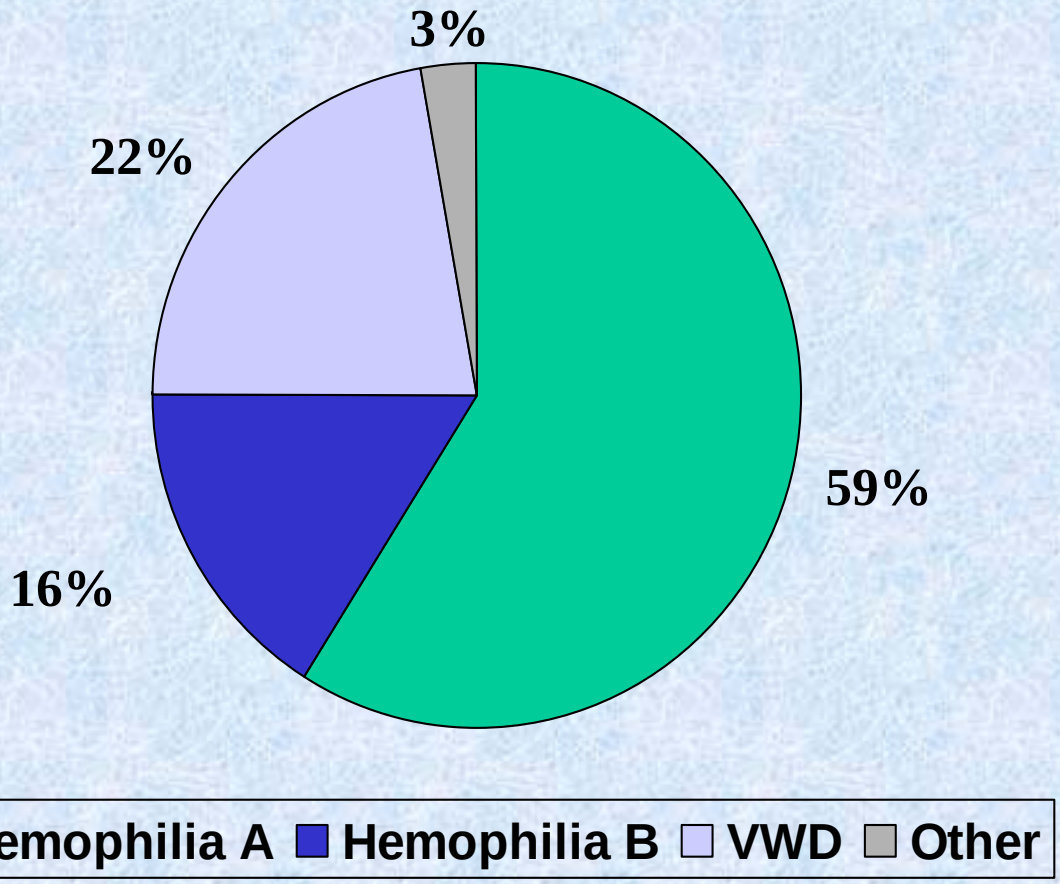
Inhibitor Pilot Study

- 10 sites have been selected to pilot the procedures and enroll 50 patients
- Funding for a data coordinator to obtain blood specimens and get detailed data on treatment of all bleeds
- Centralized inhibitor testing at CDC
- Hemophilia gene sequencing at CDC
- Funding from Wyeth Pharmaceuticals

Blood Product Exposure

- Data coordinators will work intensively with participants
- Various methodologies will be employed including electronic infusion logs
- Data on every infusion to include brand, amount, lot number and reason
- When fully implemented will provide post market surveillance for inhibitors

Distribution of Bleeding Disorders



Proportion of Patients with Rare Bleeding Disorders Captured in UDC

	In HTCs	In UDC	Percent
Factor II	64	10	16%
Factor V	149	44	30%
Factor VII	527	138	26%
Factor X	86	34	40%
Factor XI	539	106	20%
Factor XIII	106	40	38%

Factor X

- The 34 patients in UDC had an average 4.9 bleeds/6 months (range 0 – 90)
- 14 pts received prothrombin complex conc
- 6 pts received FFP
- 2 pts used DDAVP
- 4 pts used Amicar

Factor XIII

- The 40 patients in UDC had an average 2.0 bleeds/6 months (range 0 – 9)
- 2 pts received factor VIII products
- 25 pts received factor XIII
- 7 pts received cryoprecipitate
- 3 pts received FFP
- 1 pt used Amicar

Special Uses of UDC

- Post market surveillance
- Identification of HTC population subsets for special study (e.g., women with moderate to severe hemophilia)
- Identification of subjects eligible for clinical trials of new treatments (e.g., patients for treatment of hepatitis C)

The Vision

- Enhanced collaboration among providers, industry and government with a national research agenda
- Nationally recognized oversight body with representation from all stakeholders that provides governance and peer review
- Centralized data repository
- Uniform national database with web interface
- Utilize UDC as resource to stimulate research questions and identify study cohorts

How do we get there?

- Agreement from HTC community – HTRS, NHF, MASAC, NDOC, UDC Working Group, Regional directors and coordinators, HTC providers
- Accomplishments
  - Major tasks identified
  - Seed money donated by HOG
- Next steps
  - Sub-committee formation to start in July

Conclusions

- The UDC is a valuable public health tool that helps our program address our mandate
  - Identify risk factors for complications
  - Monitor the effectiveness of interventions designed to decrease complications
- The UDC is being expanded to serve the needs of the whole bleeding disorders community